

1 HYDEE FELDSTEIN SOTO, City Attorney (SBN 106866)
2 JULIE C. RILEY, General Counsel (SBN 197407)
3 MELANIE A. TORY, Deputy City Attorney (SBN 252387)
4 NICHOLAS J. KARNO, Deputy City Attorney (SBN 210805)
5 221 North Figueroa Street, Suite 1000
6 Los Angeles, California 90012
7 Telephone: (213) 367-4530
8 Facsimile: (213) 367-4588
9 Email: Nick.Karno@ladwp.com

10 Attorneys for Petitioner
11 THE CITY OF LOS ANGELES, acting by and through
12 ITS DEPARTMENT OF WATER
13 AND POWER

14 **BEFORE THE HEARING BOARD OF THE**
15 **SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

16 In the Matter of

Case No. 1263-80

17 THE CITY OF LOS ANGELES, acting by and
18 through ITS DEPARTMENT OF WATER AND
19 POWER,

DECLARATION OF IAN GUTHRIE
FOR THE CITY OF LOS ANGELES,
acting by and through ITS
DEPARTMENT OF WATER AND
POWER TO THE HEARING BOARD

20 [Facility I.D. No. 800074]

Petitioner,

Date: February 8, 2024
Time: Consent Calendar

vs.

21 SOUTH COAST AIR QUALITY MANAGEMENT
22 DISTRICT,

Respondent.

23
24 Petitioner, The City of Los Angeles, acting by and through its Department of Water and Power
25 (“LADWP”) hereby submits this Declaration of Ian Guthrie, Plant Manager, to the Hearing Board in
26 support of the request for a modification to extend the regular variance in this matter:
27

28 1. I currently serve as the Plant Manager for LADWP’s Haynes Generating Station
(Haynes) and have been employed by LADWP for approximately 22 years. As part of my duties, I am

1 involved in ensuring our facility's compliance with its Title V permit. I am familiar with LADWP's
2 petition for a regular variance in the above-referenced matter and with the subject equipment.

3 2. LADWP is the largest municipal utility in the nation and supplies water and electric
4 services to 3.8 million residents and businesses in the City of Los Angeles. As a vertically integrated
5 power system, LADWP both owns and operates the majority of its generation, transmission, and
6 distribution systems. A five-member Board of Water and Power Commissioners is appointed by the
7 Mayor and establishes policy. Together, LADWP and the City of Los Angeles have been at the forefront
8 of California utilities in adopting aggressive clean energy initiatives. To that end, LADWP has set goals
9 to meet renewable energy targets, while at the same time maintaining reliable and cost-effective power
10 supply for customers. The future of LADWP's energy supply has zero coal, expanded renewables,
11 energy efficiency, clean energy projects, and dramatically reduced fossil fuel emissions.
12

13
14 3. Haynes is a natural gas-fired steam electric generating facility located in the City of Long
15 Beach. Haynes currently operates two conventional steam boiler generating units (Units 1 and 2), two
16 combined-cycle units (combustion turbines Units 9 and 10), and six-simple cycle units (Units 11 to 16).
17 Haynes has a generating capacity of 1,666 megawatts (MW), enough to power approximately one
18 million homes.
19

20 4. Haynes is one of LADWP's three major coastal power plants (along with Harbor
21 Generating Station and Scattergood Generating Station). Together, they support 2,839 MW of installed
22 capacity, thus providing approximately 85% of the total generating capacity within the City of Los
23 Angeles and 39% of the total generating plant capacity owned by LADWP. Haynes Unit 2 is a vital
24 component in LADWP's portfolio of in-basin generating facilities accounting for 13.8% of Haynes'
25 total generating capacity and helping to ensure voltage support and grid reliability.
26

27 5. Unit 2 is listed under Section D of Haynes' Title V Permit to Operate and is a
28 conventional natural gas-fired boiler, steam-electric generating unit with a capacity of 230 MW.

1 Commissioned in 1963, Unit 2 is equipped with a Selective Catalytic Reduction (SCR) system to control
2 NOx and its emissions are monitored by a Continuous Emissions Monitoring System (CEMS).

3 6. While there are periodic maintenance inspections for the steam turbine generator and
4 associated components, station personnel continuously inspect the equipment and monitor the status of
5 the turbine generator throughout operation. Operations personnel write up faulty equipment notifications
6 and issue work orders at the first sign of problems with equipment during operation. Routine inspection
7 and repair of the generating unit equipment occur annually, with the last scheduled maintenance outage
8 completed in June 2023. Typical scheduled maintenance outages consist of routine repairs that require
9 the unit to be offline, including repair of critical valves, piping systems, and safety valves. The
10 maintenance also includes regulatory work, calibration, and inspection of fuel measuring devices.
11

12 7. Major turbine overhaul/refurbishment occurs every five to 12 years in the industry,
13 however duration between overhauls is determined by several factors, such as hours of operation,
14 current unit performance, outstanding equipment problems, and expected remaining life of the
15 generating unit. The last major turbine overhaul on Unit 2 was completed in 2009 during which the
16 entire turbine was inspected and repaired (high/intermediate pressure (HP/IP) rotor removed, inspected
17 and repaired; low pressure rotor removed, inspected, and repaired; all main stop and control valves
18 overhauled). The turbine was not scheduled for major overhaul since 2009 in light of the low-capacity
19 factor of the unit.
20
21

22 8. Unit 2 has suffered a long history of delays beyond the reasonable control of LADWP.
23 General Electric (GE) is the responsible party for the technical and material resources for Unit 2's steam
24 turbine. In September 2022, following a blade liberation event, LADWP and GE developed a repair plan
25 and issued a task assignment on February 8, 2023. The lead time for the required parts was estimated at
26 14 weeks and involved the manufacture of three sets of rotating blades and two sets of stationary blades.
27 An initial Estimated Time of Return (ETR) for Unit 2 was scheduled for June 16, 2023.
28

9. Delays in the manufacturing process pushed the delivery of the parts to May 2023. GE

1 then finished their repair work on the rotor and delivered it to the site in June 2023. GE installed the
2 stationary blades in July 2023. However, during the rotor's fit test, it was determined that the axial
3 clearances were not correct and had to be addressed by GE. Modification of the stationary blades was
4 finally completed in August 2023, and the ETR was pushed to September 2023, based on the remaining
5 scope of work.
6

7 10. During the final blade tip clearance reads in September 2023, it was found that GE needed
8 to rework the newly purchased blade tip seals. The rotor was reinstalled and the top case was mounted on
9 the turbine by the end of September 2023. The unit was mechanically assembled and insulated by October
10 2023. The ETR was updated to December 8, 2023.
11

12 11. The generator was then reassembled and prepared for startup on December 8, 2023.
13 However, a ground fault relay occurred during the startup while trying to synchronize the generator and
14 the startup was aborted. Investigation of the ground fault determined that the generator exciter was
15 contaminated with moisture and debris. It was then cleaned, dried, and tested through December 18, 2023.
16 Unit was started up again and successfully synchronized to the grid on December 19, 2023.
17

18 12. Unit 2 was loading to 150 MW when vibrations spiked and had to be tripped to minimize
19 equipment damage. Bearings 3 and 4, which surround the Intermediate and Low Pressure Turbine number 1
20 (IPLP 1), showed very high values during the vibration event. It appears as IPLP 1 suffered a blade liberation
21 event, much like that seen on September 26, 2022, except upstream of the rotor that failed in 2022. During the
22 vibration event, salt levels in the condensate hot well increased and operations had to secure boiler feed pumps
23 to prevent fouling the boiler tubes.
24

25 13. Due to unexpected excessive vibration, liberation of turbine blades, and ensuing damage
26 to other parts, Unit 2 has not been available to run since the initial vibration issues and unit trip on
27 September 26, 2022. Given the turbine's current state and the timeline for the previous repair efforts, Unit
28 2 could not be repaired and restarted in time to meet the December 31, 2023 deadline for the annual
ammonia slip test.

1 14. The permanent inability to operate Unit 2 would result in incalculable costs to the
2 residents of the City of Los Angeles. The cost of the unit itself and the ensuing stress on LADWP’s
3 ability to generate power would result in hardships to LADWP’s customers, many of whom are
4 demographically at or just above the poverty level, because they would shoulder the burden of paying
5 for these costs.
6

7 15. Additionally, LADWP’s ratepayers would also bear the expense of any resulting fines
8 and penalties if this variance is not granted. LADWP could be subject to a Notice of Violation for the
9 entire duration that the ammonia slip test is not successfully performed.
10

11 16. LADWP has already terminated Unit 2’s operations since December 19, 2023, and it is
12 not possible to curtail operations because the unit is out of service.

13 17. Even with operations temporarily terminated, LADWP will still require a variance. While
14 this petition is seeking relief from complying with the ammonia slip test due date of December 31, 2023,
15 LADWP recognizes that Unit 2 must be brought back to service as soon as possible before the ammonia
16 slip source test can be performed.
17

18 18. There will be no excess emissions because Unit 2 is not operational and is out of service.
19 During the variance period, LADWP will continue to monitor and record emissions through the CEMS,
20 which will be operational during the repair of Unit 2. There is no ammonia analyzer installed on Unit 2.
21 The source test will be the basis of compliance with the ammonia slip permit limit.
22

23 19. On December 27, 2023, LADWP was granted an interim variance from District Rules
24 3002 (c)(1), 203 (b), 2004 (f)(1), and Permit Condition D28.3, effective January 1, 2024 through
25 February 8, 2024 and now seeks a regular variance for February 9, 2024 through December 31, 2024.
26

27 20. LADWP expects to achieve final compliance by December 31, 2024. The requested
28 variance coverage of one year will allow sufficient time to perform the necessary repairs and validate the
integrity of the repairs prior to returning the unit to normal operation and performing the ammonia
source test.

1 21. Per Condition No. 1 of the Regular variance, Petitioner shall complete the repair of Unit
2 No. 2 (Device No. D4 & C75) expeditiously and provide a notification when the repair is complete to the
3 South Coast AQMD via email to AQ Engineer Philip Nguyen (pnguyen2@aqmd.gov), AQ Inspector II
4 Avelino Revilla (arevilla@aqmd.gov), and Supervising AQ Inspector Thomas Lee (tlee2@aqmd.gov).

5 22. Per Condition No. 2, Petitioner shall conduct the ammonia slip test, in order to satisfy the
6 2023 source test requirement only, in accordance with permit condition D28.3 within 14 days after reaching
7 normal operating conditions (after the cold start-up period) but no later than December 31st, 2024.

8 23. Per Condition No. 3, Petitioner shall notify the South Coast AQMD by calling 1-800-CUT-
9 SMOG and by sending an email to AQ Inspector II Avelino Revilla (arevilla@aqmd.gov), Supervising AQ
10 Inspector Thomas Lee (tlee2@aqmd.gov), and AQ Engineer Philip Nguyen (pnguyen2@aqmd.gov) at least
11 24 hours prior to starting the ammonia slip test.

12 24. Per Condition No. 4, Petitioner shall submit a complete source test report showing
13 preliminary compliance with ammonia slip conditions to the South Coast AQMD Source Testing
14 (sourcetesting@aqmd.gov) and to AQ Inspector II Avelino Revilla (arevilla@aqmd.gov) and Supervising
15 AQ Inspector Thomas Lee (tlee2@aqmd.gov) within 45 calendar days after the test date.

16 25. Per Condition No. 5, Petitioner shall operate the CEMS to continuously monitor the exhaust
17 from the Unit No. 2 (Device No. D4 & C75) and record all required parameters (i.e. NOx concentration,
18 oxygen content, and fuel flow) pursuant to Rule 2012, Appendix A, Chapter 2 for the duration of the
19 variance period, including showing valid zeros for all parameters when the turbine is not operating. In lieu of
20 the of the abovementioned requirement, the Petitioner may choose to comply with the requirements in Rule
21 2012(c)(2)(D) and 2012 (c)(2)(E), as amended on November 3, 2023.

22 26. Per Condition No. 6, Petitioner shall notify the Clerk of the Board in writing when final
23 compliance is achieved.


24 27. If the variance in this matter is granted, Petitioner will comply with the conditions set
25 forth in the Order as required by the Hearing Board.
26
27
28

1 28. Petitioner requests a regular variance, beginning today and continuing to December 31,
2 2024, to operate Haynes Unit 2.

3 29. Operation under the order is not expected to result in a violation of Health and Safety
4 Code Section 41700.

5
6
7
8
9 **FOR THE LOS ANGELES DEPARTMENT OF WATER AND POWER:**

10 Dated: February 6, 2024

11 
12 By: _____
13 Ian Guthrie
14 Plant Manager, Haynes Generating Station